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ABSTRACT

This guide gives five formats and examples for helping middle school and high school students clarify relationships between environmental knowledge and decisions. Section I introduces the need for values clarification. Section II defines values clarification. Section III explains four phases of values clarification. Section IV explains the need for a value sheet, a planned written activity designed to elicit value clarification patterns of language usage from students. Section V lists the parts of the value sheet. Section VI presents four interrogative modes which may be used in questioning students. Section VII discusses five formats which may be followed. The examples presented are designed to be used in conjunction with units focusing on energy use and pollution. Teachers are encouraged to copy and modify these value sheets. Each of the formats outlines needed teacher preparation, the situation for discussion, and decisions to be made. The guide lists discussion questions and gives samples of value sheets. A bibliography of materials related to the values clarification approach is included. (Author/AJ)

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VALUING EXERCISES

FOR THE

ENVIRONMENTAL EDUCATION CLASSROOM

Robert J. Stahl
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Mississippi University for Women
Columbus, Mississippi 39701

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VALUING EXERCISES FOR THE ENVIRONMENTAL EDUCATION CLASSROOM

I. INTRODUCTION

Comprehending and utilizing scientific knowledge about the environment towards assisting man in making decisions which could affect his 'spaceship' is one of the most important goals of environmental education. In middle and secondary school classrooms, environmental education focuses on the acquisition of scientific knowledge and the application of this knowledge towards helping students make better decisions in matters that will ultimately affect the environment. One way of incorporating scientific understandings within decision-making processes concerning the environment is to engage students in content-oriented values clarification episodes.

II. VALUES CLARIFICATION DEFINED

Values clarification involves patterns of language which students use and from which a teacher may reasonably infer that internal valuing is occurring. This approach to values clarification is verbal and enables teachers to plan, teach, and assess learning according to their students' oral performances. Thus, teachers who posit values clarification as an instructional goal should design and guide student activities towards eliciting these verbal behaviors from their students.

III. FOUR PHASES OF VALUES CLARIFICATION

A values clarification strategy consists of four phases. These four phases are: (1) the Comprehension Phase; (2) the Relational Phase; (3) the Valuational Phase; and, (4) the Reflective Phase. Each of these four phases is to be described briefly below. While these four phases are presented in sequence, during actual classroom episodes students may move among these phases, especially the first three, as necessary in order to clarify their values.

(1) The Comprehension Phase. When values are being considered and clarified, there is an object of valuation. This may be a personal condition (e.g., deciding whether or not to abort a living fetus); a social condition (e.g., the wasting of energy, or societal apathy toward ZPG); an environmental condition (e.g., pollution

of the oceans, seas, lakes and rivers); or a combination of personal, social, and environmental conditions. At other times, this object of valuation may be scientific knowledge (e.g., cloning); a problem-solving situation (e.g., deciding whether to support new industrial construction in the local community); or a dilemma where scientific knowledge may be used (or misused) to cope with a problem situation (e.g., dropping the A-bomb or building nuclear power plants). If the condition or situation is to be accurately assessed and rationally valued, it is necessary that the object of valuation be understood.

During the Comprehension Phase, students use patterns of descriptive language to denote the level of their understanding of the condition or situation. They express factual statements providing evidence of their basic comprehension. They translate and interpret this factual information. When necessary, students define terms and clarify previous statements. When used in combination with one another statements such as these provide verbal evidence that the object of valuation has been understood by students. Such statements provide the teachers with data suggesting students have gained knowledge and understanding of the object they are studying and around which they are to clarify their values.

(2) The Relational Phase. Being content-oriented, this approach integrates values clarification responses with the subject matter being studied through the Relational Phase. This phase allows the classroom teacher to assist students to clarify their values related to the environment while simultaneously understanding and applying the environmental subject matter content studied in their instructional unit. To fail to integrate values clarification processes and content-oriented learnings may allow students to infer that there is no relationship between the subject matter of environmental education and the values they possess or clarify regarding environmental-oriented conditions and decisions.

During the Relational Phase, students connect the object of valuation they have comprehended to the concepts, knowledge, and understandings they have learned or are learning. Students may relate the situation or condition they are studying to previous knowledge learned in thie course. Students may state how the situation being studied is connected to the major concepts at the focus of their unit of study. Students may state how the knowledge or condition is similar to or different from other content studied by the class. This integration of subject-matter learnings ensures a greater understanding of the knowledge or condition being examined within the values

clarification episode. In addition, it assists students in seeing the relevance (relatedness) of the materials currently being studied to the content and activities presented previously.

(3) The Valuational Phase. When students engage in the valuing process, they assign preferences to objects of valuation. Frequently, they attach labels such as "good," "bad," "right," "poor," and "worse" to these objects. Not only do students assign such labels but they often must consider their ratings in terms of several other objects that they also prefer. Hence, preferences may be given different value-ratings according to how each student (or his peer group) choses to organize his priorities. Choices of policies and the criteria used to select such policies are the result of individual preferences. Consequences of decisions, of choices, and of suggested policies may be examined in relationship to their value-base. Students may express their personal feelings. Students may empathize with individuals whose conditions are being studied.

During this phase, students express their preferences and feelings. They state possible alternative policies or expected consequences of these policies. Students may identify the criteria they believe is the best one or the one that ought to be used for a given situation. The teacher may use expressions such as these to infer that students are engaged in the process of clarifying their values. When used in combination with one another, the teacher has evidence that students are acquiring and using valuing skills.

To be most effective, the Valuational Phase assumes students have already engaged in or are simultaneously engaging in Comprehension and Relational Phase behaviors. Such experiences ensure students are engaged in clarifying their values in light of adequate comprehension of the learning situation and an understanding of its relationship to the unit of instruction. Each successful value clarification activity requires the interactive use of the three phases just described. The completion of these three phases within one values clarification activity generates data that may be used during the Reflective Phase, the fourth phase of values clarification.

(4) The Reflective Phase. Internal consistency is a highly valued behavior. This phase is designed to enable students to examine the consistency of how they assigned their value ratings as well as the consistency of their use of these assigned ratings. Therefore, the data used during this phase is taken from previous activities incorporating phases one through three.

Once students have completed at least three values clarification exercises containing the first three phases and related to the same instructional focus, they are ready to begin the Reflective Phase. During this phase, the teacher seeks to assist students to examine:

How they obtained their knowledge and understandings;
How they formed relationships;
How they determined relevance;
How they empathized;
How they assigned values; and,
How they expressed their feelings.

An exploration into these critical areas helps students to reflect upon and re-consider their understandings, relationships and assigned preferences. If warranted, students may modify or reorganize their learnings or their value rankings. Instruction designed to enable students to achieve successful completion of the Reflective Phase is appropriately labeled a 'values clarification strategy.'

IV. THE VALUE SHEET

One way of securing values clarification verbal responses from students is to locate or to develop and assign value sheets. Value sheets are carefully planned and written activities designed to elicit value clarification patterns of language usage from students. Furthermore, value sheets in connection with ongoing instruction, the teacher avoids the danger that students will perceive valuing as a form of activity isolated from and not related to the cognitive tasks they are engaged in and the content they are learning. In addition, the teacher need not break the flow of instruction in order to take time out for values clarification activities.

Value sheets may be written in at least six different formats. Each format stresses procedures one may use in order to clarify their values and make decisions. Casteel and Stahl have identified and described six different formats in which value sheets may be written.[1] Five of these formats are presented in this monograph. The five formats are called:

The Standard Format

The Forced-choice Format

The Affirmative Format

The Rank-order Format

The Classification Format

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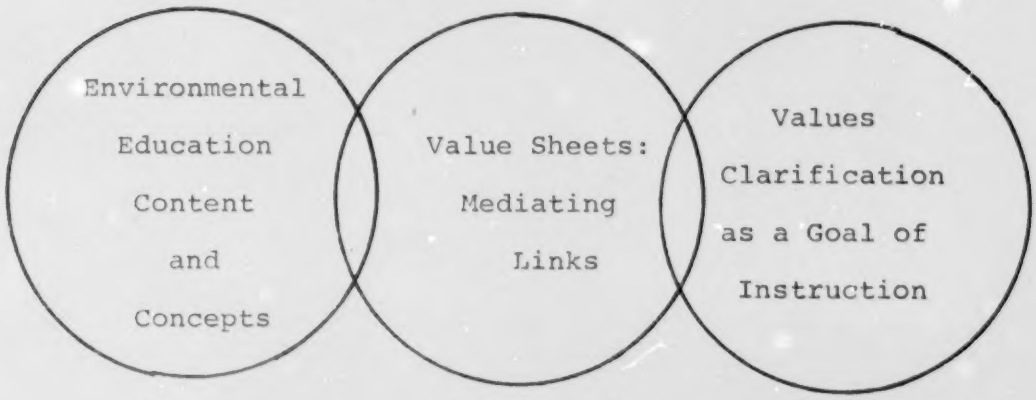
[1] See Bibliography

Value sheets written in each of these formats have been used in language arts, social studies, core, aviology, and science classes at P. K. Yonge Laboratory School.

The intent of this monograph is to present examples of five formats of the value sheet applicable to environmental education classrooms. The examples presented herein were designed to be used in conjunction with environmental units focusing on energy use and pollution. Environmental education teachers are encouraged to copy (and modify) these value sheets in order to "experiment" with this approach to values clarification. As teachers experiment with these examples, they may find it useful to observe how value sheets link environmental education content learning and valuing behavior (see diagram below).


Environmental Education Content and Concepts
Value Sheets: Mediating Links
Values Clarification as a Goal of Instruction

V. ELEMENTS OF THE VALUE SHEET

Every value sheet contains at least two elements. First, there is a social and scientific context. This presents the focus of values clarification and established the context within which students are to respond. This context may simply describe an event that occurs or has occurred or that is contrived by the teacher. This context may also present the students with a role and a situation within which he is to fulfill his assigned role.

Secondly, there are eliciting questions in the form of discussion starters. These questions provide a frame of reference through which the teacher can guide students towards understanding the focusing context of the values clarification episode, towards relating this content and context to the focus of the unit being studied, and towards having students express their personal preferences and feelings (see Figure 1). Although these questions help the teacher to guide follow-up discussions, the teacher needs to be flexible and open. The questions prepared in advance are not to be rigidly adhered to nor followed in the sequence suggested by their order on the list. In order to be effective, the teacher should feel comfortable using at least four different modes of questioning behavior. These four modes of interrogative behavior are presented in Figure 2.[2]

As value sheets become complicated, decision sheets are added. These guide the responses of students and, through practiced repetition, help students to master some of the vocabulary, skills, and procedures (i.e., heuristics) of values clarification.

VI. FOUR INTERROGATIVE MODES

Once students are engaged in a values clarification exercise, the teacher may monitor student verbal responses using the model just described. Should students diverge from the model, to the degree the focus of instruction is lost, the teacher may need to provide internal set, structure, or differentiated reinforcement to assist students return to their assigned task. In order to manage and guide student responses within the exercise, teachers may also use the four types of questions suggested earlier.

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[2]There is an instructional module designed to help teachers learn to understand and use these four interrogative modes: J. Doyle Casteel and Robert J. Stahl, Verbal Strategies of Valuing. 1975, 39 pages.

The four interrogative modes are consistent with the first three phases of values clarification outlined earlier. Empirical questions are used to help students collect and pool factual data associated with the Comprehension Phase. Relational questions are used to assist students to make comparisons, find relevance, and identify relationships associated with the Relational Phase. Valuing and Emotive questions are used to focus student responses towards their personal preferences, ratings and emotions. The questions provided in Figure 2 are illustrative of the kinds of questions teachers may use to guide student responses during the first three phases of values clarification.

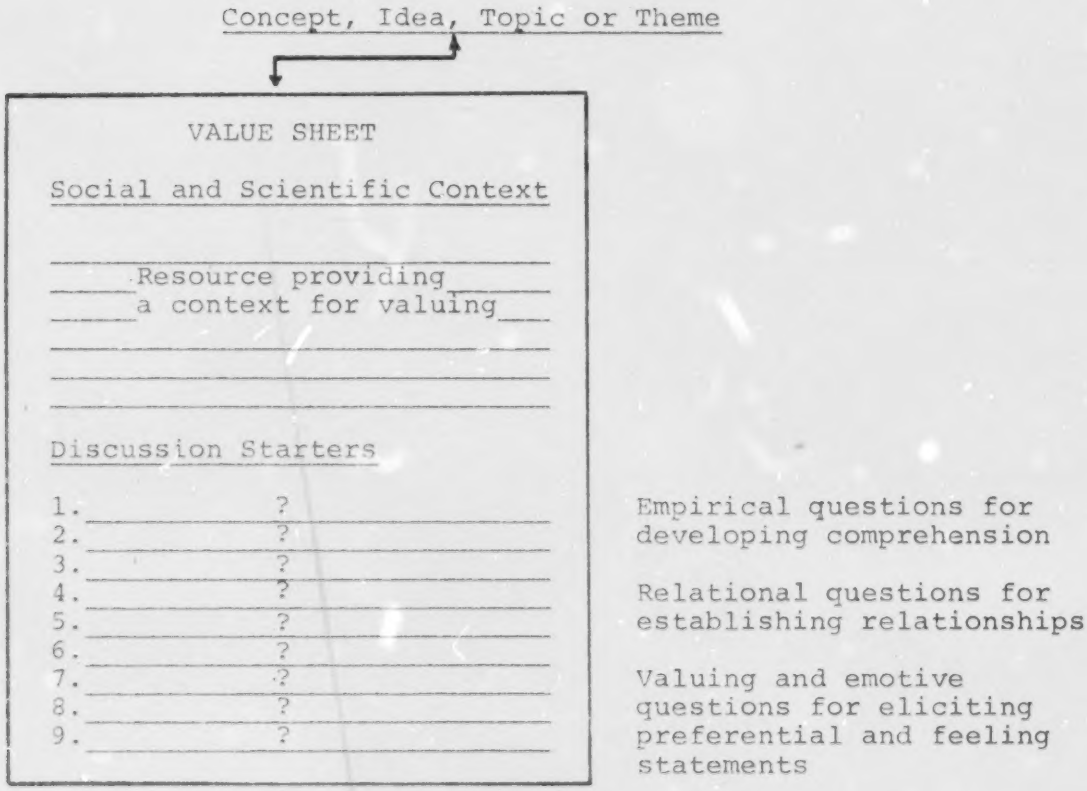

Figure 1

A Model Illustrating the Role of Eliciting Questions During the First Three Phases of Values Clarification

THE FOUR INTERROGATIVE MODES

EMPIRICAL	RELATIONAL	VALUING	EMOTIVE
What did you see?	How does what you saw relate to the topic?	Is this proposed new policy good for man?	Do you feel excited about what you saw? heard? read? experienced? remember?
When did it occur?	How does what you heard relate to the topic?	Are the events you witnessed bad for those persons seeking to protect our energy supplies?	Now that you know music may be related to noise pollution, how do you feel towards 'acid-rock'?
Who wrote the article?	In what way does what you just read relate to what you saw yesterday?	Are the expected consequences of the project good you our community?	Are you upset that no one has effectively stopped man's pollution of the environment?
What did you read?	How does what you observed relate to our topic?	If we all agreed with the feeling you just expressed, would your decision still be the right one to take in this situation?	If you found yourself in the situation we have described, what would be your most immediate feelings?
What did you observe?	When you identified anxiety as a good consequence, how were you relating it to your decision to continue wasting energy?		
Where did it take place?			
What did you experience?			
What do you remember?			
What happened?			

Figure 2

Types of Teacher Questions Associated with Values Clarification

VII. SAMPLES: FIVE FORMATS OF THE VALUE SHEET

Five samples of the value sheet are presented in this section. Each sample illustrates one of the formats in which value sheets may be planned. Each sample to be presented will contain the following components.

Teacher Preparation: This component is intended to suggest how the value sheet might be used in the classroom. Teachers are encouraged to modify this element in order to make the value sheet fit in with their instructional goals and situation. This section suggests ways the teacher would insure that his students were prepared to handle the content, vocabulary, or procedures included in the particular activity.

Social and Scientific Context: This presents the situation which students are to understand, to relate to the unit of work they are studying, and towards which they are to express value and feeling statements. It often presents a role and a situation in which students are to respond. This section frequently stresses student role-taking rather than role-playing, i.e., that students become the person in the situation presented rather than merely playing the part of this individual. Modification of the context may be necessary to fit the particular group of students each teacher is working with in his own classroom.

Discussion Starters: These are intended to guide follow-up discussions. These questions are not be to slavishly followed; rather, they are to serve as a frame of reference for teachers. In developing and asking their own questions relative to where the students are at the time of the follow-up discussion, teachers should see the questions provided as the 'kinds of questions' they should ask. To the degree the teacher alters and students engage in the activity, the teacher will need to modify these questions to fit the appropriateness of existing teaching-learning situation.

Teacher Preparation

1. Secure a copy of the value sheet for each student to use.

2. Check the vocabulary used in the social and scientific context in order to determine if you need to develop a glossary prior to assigning the value sheet.

3. Determine whether you wish students to write our answers to the discussion starters or simply to consider how they would answer the questions. (If students [or teachers] are unaccustomed to values clarification activities, it is a good idea to have students commit themselves on paper in order to facilitate follow-up discussions.)

4. Check the follow-up questions. Make certain that there are questions that will enable students to see the valuing exercise as an activity that is related to the unit they are studying.

Social and Scientific Context

"And Ye May Keep Your Pet Rocks"

The U.S. Department of the Interior has announced proposed regulations governing the importation of wildlife which are injurious to human beings, forestry, agriculture, horticulture, and native wildlife.

A Department spokesman reported the following:

> Eight people a year are bitten by imported poisonous snakes. Exotic pets bit at least 163 people in New York City alone during 1972. Each year small turtles in pet stores are estimated to cause 40,000 cases of salmonella poisoning. Imported monkeys can infect humans with hepatitus and tuberculosis. Venomous fish set free have poisoned and paralyzed people. Newcastles' disease, brought in by parrots and mynah birds, killed over 11 million chickens in California in 1973.
>
> The proposed regulation would prohibit the import of injurious wildlife except as permitted by the Secretary of the Interior for scientific, education, zoological, or medical purposes. The proposal includes a list of "low risk" wildlife, which means that

all species not listed as "low risk" would be prohibited from importation except under a strict permit system and for the reasons indicated above.

Should these proposed regulations be adopted, they would have a significant impact on the pet industry in the United States. The ornamental aquarium fish and accessories trade is expected to be the hardest hit. These regulations would reduce bird importation by about 50 percent, mammal importation by 45 percent, and the importation of reptiles by 95 percent. Imported amphibians would be curtailed by about 15 percent. Such reductions may well cause many pet stores to close. In addition, department stores which include 'pets for sale' sections may eliminate their pet sale divisions.

Discussion Starters

1. Which governmental agency is seeking to restrict the importation of wildlife?

2. What have been the consequences of wildlife already imported into the United States.

3. How would the Department spokesman define wildlife? Pollution?

4. In what ways might imported wildlife be considered a pollutant?

5. Besides those given in the article, how might the new regulations affect the American pet industry?

6. Suppose you were waiting for an imported pet and heard that these new regulations prohibited it. Would you be upset?

7. The Department of the Interior actively seeks to restrict wildlife considered dangerous to the environment. Is this a good policy for an agency of the federal government to enforce?

8. Suppose the Department of the Interior asked you to list other ways of helping it preserve the environment from destruction. What are some additional policies the Department could adopt in order to preserve our nation's environment?

FORCED-CHOICE FORMAT

Teacher Preparation

1. Secure a copy of the value sheet for each student who will respond to the value sheet.

2. Determine if you wish students to respond to the decision sheet first as individuals and then in small groups of four or five.

3. Check vocabulary to make certain that students can read and comprehend the social and scientific context. (If this format is new to students or to the teacher, let students read the situation, discuss it to assure initial understanding, and then distribute the decision sheet.)

4. Determine if you will have students stop after paragraph 6 in order for you to review with them the context and situation in which they are to respond. This review is designed to help students better understand the context they are to operate within as they proceed towards the final steps of the activity.

5. Prepare a decision sheet consistent with the grouping arrangement you choose to use. (For example, the decision sheet for this example is written for a small group of five students who are to agree on a common response.)

6. Check the discussion starters to make sure that some of the questions will help students to relate this exercise to the topic they are studying.

Social and Scientific Context

"Eeny, Meeny, Miny, Moe,..."

The end of the year was fast approaching. The city manager of your city announced that there would be a sizeable sum of money left over at the end of the year. However, according to state law, all monies left unspent have to be returned to the State Treasury.

You are a member of the city council. You have long hoped for extra money to be available to spend. For years you have sought support for three of your pet projects. In fact, just last year the city council voted to spend any extra money for your projects. Now it appears your three projects will be funded. You have wanted the money to:

--build bike paths to protect young bicyclists;
--build and operate a park and small animal zoo; and
--purchase a large piece of land as a natural wildlife refuge.

This evening the city council is meeting for the last time this year. The decision to spend the money must be made tonight.

You have already reminded the council members of their vote twelve months ago to fund your three projects when the money was available. It appears the money is now available.

As the city manager begins the meeting, your dreams are shattered. Only one-third of the money that was thought to be available was still left unspent. Of your three projects, only one can be funded. The council members inform you that they can and will spend the money on one of your projects. It is your choice. However, they cannot promise or guarantee that extra money will be available next year or the next. To delay your decision would force them to fund other projects proposed by other members of the council.

In other words, if you decide not to make a choice, you will get none of your projects funded. Should you decide on one of the three, you will probably never get your other two projects funded. The council members agree that you must choose from the three projects you have long supported. You must choose one of the following:

--to build the bike paths.
--to build and operate a city park and small animal zoo.
--to purchase land for a natural wildlife refuge.

(Use the decision sheet on the next page to record your answer.)

Decision Sheet*

Directions: Members of your group are to agree on one of the three options offered to you as a Council member. You should seek some basis for agreement. This means that you are not to vote. Instead you must reach a common conclusion that all members of your gorup are willing to accept and support.

The three possible projects that could be funded by the Council are:

1. _____

2. _____

3. _____

Of these three projects, the best project is:

_____

If asked to provide our (my) grounds for making this decision, we (I) would say:

_____

_____

_____

_____

The person(s) responsible for making this decision are:

_____

_____

_____

_____

_____

*This decision sheet was written for a small group to respond to this exercise. You may want to have students individually complete this form before having the group attempt it. You may modify the context to make a small group rather than one individual responsible for making the choice.

Discussion Starters

1. Remembering that bicycle paths would lead some motorists to stop driving to work, which of the three projects would be the most protective of the environment?

2. How might one associate the concept of conservation to the wildlife refuge project? the small animal zoo project? the bike path project?

3. Which project would reflect the 'wisest' use of the money available to spend?

4. Is it bad that projects such as those listed were not already funded by the City Council?

5. What projects that operate to preserve and protect the environment are already supported by your city's government?

6. The building of roads and parking lots have been condemned by many environmentalists. Would an environmentalist who worked against the building of roads support the "bike path project"?

THE AFFIRMATIVE FORMAT

Teacher Preparation

1. Check the vocabulary in the social and scientific context in order to determine if you need to help students develop definitions.

2. Determine if you wish students to respond individually or as members of small groups to this exercise.

3. Determine if you need to help students review noise-sound levels, especially levels that are harmful to human auditory organs.

4. Check discussion starters to make certain that one or two questions help students relate this exercise to the unit they are studying.

Social and Scientific Context

"Hear Ye! Hear Ye!"

The spring party is the biggest event of the year. Everyone goes to the party. Because poor bands have played in the past, most students are not planning to go to the dance at the end of the party. This year, however, the dance promises to be a special occasion. The Johnny Fischer Band, the best band in the area, will play at the dance.

You are to assume you are a student at Hontoon Jr. High School. Further, you are to assume you are student chairperson of the Spring Party Committee. With the help of several teachers and students, you have planned the entire event. You were the one who contacted the band. For your hard work you have been congratulated by the school's principal.

It is two weeks before the party and dance. At this time every detail has been checked and double-checked. Everything is "go"!

Today during second period you are called to the principal's office. He reports that he had just received a phone call.

"A group of students from the University have been doing some studies on the noise level of our community. At a dance last night, the music played by the Johnny Fischer Band reached a noise level of 116 decibels for long periods of time. As you know, this level is harmful to the human hearing system."

"When the university students informed the band members of the noise level, they laughed at them. In fact, the band played even louder."

"I'm not sure if I want this band to play at our dance. The music it plays is too loud. But it is too late to get a real good band to take its place."

After a short conversation with you, he suggests that you, as the representative of the student body, should decide what ought to be done.

You are to return to your class, think about the situation, and report to the principal's office at the end of the period. You are to tell him your decision at that time.

As you try to reach your decision, you remember this:

- after years of poor attendance at the dance, this year most students are eagerly awaiting the dance.
- the Spring party and dance is the big event of the year especially for ninth graders who will leave the school in June.
- many students worked hard to get the money to hold the party and to hire the band.
- some teachers and parents opposed the dance because they don't like the type music played by the band.
- music played too loudly can cause permanent damange to the ears.
- you have been congratulated by everyone for you outstanding work and leadership.
- to turn down the band would cause you to lose some of your friends.
- it is too late to get another good band.
- you are personally pleased with everything you have done, especially in getting the band.

The principal is waiting to hear your decision as to whether or not the band will play at the Spring Dance. You tell him. . .

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Discussion Starters

1. According to the principal, what damage is anticipated because of the loud music?

2. Which facts did you consider in making your decision?

3. What alternatives did you consider before making you decision?

4. What are the possible consequences of your decision?

5. Suppose you were also chairman of your school's Environmental Action Group. How might this position influence your decision in this situation?

6. At what point does music become noise?

7. How are music, noise and pollution related to each other?

8. When faced with making a decision to protect the things you enjoy or the things known to protect the environment, which is the more important?

9. When you were told you had to make this decision, what where your feelings?

RANK-ORDER FORMAT

Teacher Preparation

1. Check the vocabulary and help students develop definitions for words that might make it difficult for them to understand in the social and scientific context or the decision sheets.

2. Determine whether students are to work individually or in small groups. If students are to work in small groups provide directions as to whether they are to seek concensus or if they may resolve differences by a vote.

3. Make certain that students understand the directions provided on the rank-order decision sheet. This is sometimes difficult for students who have had no experience with rank-ordering.

4. Determine if you want students to stop after they have read the situation in order for you to review with them the context and situation to which they are to respond.

5. Check the discussion starters to determine that one or two of the questions tend to relate the rank-order exercise to the content students are studying.

Social and Scientific Context

"Deliverance"

After years of being labeled a "poor" area, your district has begun to pay its own way. Newly established tourist businesses have attracted people from all over the nation. New jobs with good pay were created. New housing developments are planned. New stores and other businesses have opened. For the first time, young people are talking about staying in the district rather than leave it for better jobs elsewhere. The tourist industry has changed the entire district.

For purposes of this exercise, you are a member of your state's House of Representatives. You were elected because of your efforts to bring "progress without destruction" to your district. You said that bringing business into the area should not also mean bringing an end to the local environment. The local Environmental Action Group (EAG) supported your candidacy. Many farmers and older citizens voted for you. Your narrow victory was the result of a combined effort by EAG and non-EAG voters. The business people, whom you did not expect to support you, voted for your opponent. Since your election many more businesses have opened.

As the House session nears its end, there are five key bills yet to be passed. All five are very important to your district. If passed, these bills would deal a death blow to the growing tourist businesses in your district. Businesses would close. People would lose their jobs. The district would once again become "poor." However, if passed, these bills would support the interests of your local EAG. The ecological balance and the natural beauty of your district would be preserved.

You realize you don't have time to work to pass to defeat all five bills. The citizens of your district want all five bills defeated. Mail and telegrams from your district runs 3 to 1 urging you to vote against all five bills. These messages indicate that if you vote against all five bills you will not have problems getting reelected. Members of the EAG remind you that they helped get you elected. To vote against any of the five bills would be to turn your back on the protection of the environment. You will be turning against the people who put you in office.

There is little time remaining in the session. All of the bills are given a 50-50 chance of passing. Some of the bills are designed to conserve energy. Some of the bills are designed to save the state money. Most have been proposed by the state EAG and the State Association of Farmers and Ranchers. The bills represent the strongest support environmental protection has ever received from the citizens of the state. You have to decide whether you should support the business and economic interests of your district over the interests of the environment. To date, you have successfully put-off your answer to your constituents.

The five bills and brief descriptions of each are as follows:

The Rhodes Bill (H.B. 75-109: Prevention of Hew Highways)

This bill would cut off all monies to build new roads within the state. Money would be available only to repair and maintain existing roads. The State Department of Transportation is to release all persons in excess of those needed to repair and maintain the roads. If this bill passes, two new roads planned for your district will not be built. Current estimates state that these roads would bring nearly 350,000 tourists into your district the first year.

The Gulf Bill (H.B. 75-169: Increased Tax on Gasoline)

This bill would require an additional tax of 10¢ per gallon of gasoline. It also gives permission to the governor to extend the tax up an additional 15¢ per

gallon if conditions demand it. If this bill passes, gasoline prices will rise so high that people will not be able to afford the fuel to travel to the tourist attractions in your district.

The Carr Bill (H.B. 75-214: Highway Patrol Expansion)

This bill would triple the size of the state's highway patrol department and purchase the necessary cars, radar, and other equipment. The enlarged force would effectively crack down on violators of the speed laws. A mandatory minimum fine of $75.00 is to be paid by all violators to help pay for this patrol. If this bill passes, heavy enforcement of the speed laws will take place throughout the state. Because the districts surrounding yours have not been able to enforce these laws in the past, these districts will receive extra patrols and heavier enforcement. In effect, tourists may be "scared off" from traveling through these heavily patroled districts.

The Ford Bill (H.B. 75-331: Increased Tax on Automobile Tags)

This bill would require that automobile tags be sold to owners at a rate which includes miles-per-gallon and amount of pollution. A minimum rate of $75.00 for a car tag would be set. Also, starting next year, all car owners would have to pay an additional fee for the miles their car had traveled during the year. If this bill passes, many persons who would normally have money to travel would be required to use it to buy their auto tags. Since owners will be charged at the end of the year for all the miles they've driven, the bill also reduces the amount of extra driving they will do.

The Wallace Bill (H.B. 75-332: Installation of Governors on Motor Vehicles)

This bill would require that within twelve months of passage, all private motor vehicles would be required to have a devise installed on their engine that would prevent speeds in excess of 55 miles per hour. Violators of the law would lose their license for one year and pay a $500.00 fine. If this bill passes, the people who had to speed in order to get to your district and return to their homes in the same day would be unable to continue this practice. Your district tourism council reports 30 percent of their trade is made up of people in this category.

As you examined the five bills, you realized that if you voted for these bills, you would be voting to protect the state's environment. Should you vote for these bills, you

would be endangering the progress and future of the tourist business in your district. You decided to consider each bill as it came up and then make your decision as to which ones you wanted to see passed.

However, as you entered your office this morning, a group of businessmen from your district pay you a surprise visit. They bring seven reporters with them. They inform you that they know the five bills may still be passed. They know you have not yet decided to work for or against any of the bills. They report that if all five bills are passed, you will not be re-elected next term. They demand to know which of the five bills you plan to spend the rest of the session trying to defeat. They demand an answer now!!

As you prepare to respond to the group of businessmen, you are interrupted by a group of your district's Environmental Action proponents. They report they heard of this meeting and wanted to be witnesses to what was said. Furthermore, they brought along a television reporter for recording the event. You have no way out, you must decide.

Knowing you cannot spend all your efforts to defeat or pass all five bills, you announce you will work for or against the bills in order of their priority. With this announcement, the combined audience demands to know the order in which you will work on these five bills.

Finally you announce your decision.(1)

****

"In my final decision, I choose to work towards defeating-passing the five bills in this order:

_____ The Rhodes Bill

_____ The Gulf Bill

_____ The Carr Bill

_____ The Ford Bill

_____ The Wallace Bill

I choose to work towards the defeat-passage of these bills because_____

_____

(1) Complete only after working the three decision sheets which follow. Then return to this page and state your decision.

Decision Sheet No. 1

Directions: Before making your decision, you should consider each bill in light of its possible or anticipated consequences on the tourist trade and the local environment. In the chart below, describe each bill in your own words and identify the consequences for each.

Assigned Rank	Summary of Bill (complete)	Consequences of Bill for the tourist trade	Consequences of Bill for environmental protection
___	The Rhodes Bill	(1) (2)	(1) (2)
___	The Gulf Bill	(1) (2)	(1) (2)
___	The Carr Bill	(1) (2)	(1) (2)
___	The Ford Bill	(1) (2)	(1) (2)
___	The Wallace Bill	(1) (2)	(1) (2)

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Decision Sheet No. 2

Directions: Mark the bill that would be most harmful to the tourist business with a "1," the bill that would be next most harmful with a "2," and so on until you have marked the least harmful bill to your district's tourist business with a "5."

_____ The Rhodes Bill

_____ The Gulf Bill

_____ The Carr Bill

_____ The Ford Bill

_____ The Wallace Bill

I chose the _____ Bill as the most harmful to the tourist business because _____
_____.

I chose the _____ Bill as the least harmful to the tourist business because _____
_____.

****

Decision Sheet No. 3

Directions: Mark the bill that would be most protective to the districts environment with a "1," the bill that would be next most protective with a "2," and so on until you have marked the least protective bill to your district's environment with a "5."

_____ The Rhodes Bill

_____ The Gulf Bill

_____ The Carr Bill

_____ The Ford Bill

_____ The Wallace Bill

I chose the _____ Bill as the most protective to the environment because _____
_____.

I chose the _____ Bill as the least protective to the environment because _____
_____.

Discussion Starters

1. In the story, what were the two major groups which attempted to influence your decision as to which bills to support.

2. In the situation just presented, how would the use of energy affect the prosperity of the tourist industry?

3. Suppose you have decided to rank-order the five bills according to their environmental protection ability. Would you have rank-ordered these bills any differently?

4. Individuals often make choices between what one wants to do and what one ought to do. As the legislator in this exercise, when you had to decide between the people of your district and protecting your district's environment, did you feel confused?

5. Is it good that environmental action groups have had to exert pressure on legislatures in order to get them to pass laws to preserve the ecology?

6. If there are tourist attractions near your home, how might these attractions be affected by an energy shortage? by the passage of any of these bills?

7. Suppose you lost re-election because of your voting behavior related to these five bills. What would be your feelings towards the people in your district?

Teacher Preparation

1. Divide students into groups of four or five to work on this valuing exercise.

2. Inform students that they must deal with a written situation, a rank-order decision sheet, and with other decision sheets on which they are to identify good and bad policies.

3. Check discussion starters to make sure that relational questions are included.

4. Review rank-ordering procedures with students.

Social and Scientific Context

"We're Running Out of 'Juice'"

Mrs. Yirga, Principal of Eustis Middle School, has recently received information from the local school board. The board told her that little money will be available to pay electricity and fuel bills for the rest of the school year. According to the board, starting the following Monday, all schools were to take specific steps to reduce their energy use.

Instead of making the decision by herself, Mrs. Yirga announced she wanted the students at her school to help her make the important decision as to what things would be done to cut her school's energy use.

When you and your classmates came to school this morning, your teacher handed you a note from Mrs. Yirga. The note listed nine things Mrs. Yirga could do in order to cut down on the use of energy at the school. The nine things are:

1. all audio-visual equipment including films, filmstrips, overhead projectors and tape recorders can no longer be used.

2. air-conditioning in the classrooms can be turned off.

3. air-conditioning in the library can be turned off.

4. warm water only can be available for the showers in physical education.

5. all field trips can be cancelled.

6. use of school facilities such as the gym, library, etc., after 3:00 p.m. can be stopped.

7. the serving of hot and warm foods in the cafeteria can be severely reduced.

8. the reading center located in a portable classroom, which uses equipment, air-conditioning, and lights, can be closed down.

9. in case of colder weather, heaters can be turned on only on extremely cold mornings and turned off at 10:00 a.m.

Instead of doing all these things at once, Mrs. Yirga believes that only some of these steps are necessary to cut down on the school's use of energy. So, three of these policies will be enforced immediately and three are to be identified as the most important to keep. The remaining three policies will be enforced if and when the first three fail to cut down the use of energy by the school.

You and your classmates are asked to consider these steps. In general, you and your friends agree that some of these rules are necessary. At the same time, you know that all nine policies are not to be enforced immediately. You know that Mrs. Yirga is trying to enforce a school board policy and she could make her decision without asking your help. Your class is being asked to help decide which policies Mrs. Yirga should enforce right away and which policies she should postpone unless absolutely necessary.

In order to assist you and your classmates with you decision, Mrs. Yirga asks that you do three things:

1. to rank-order from best to worst the nine policies Mrs. Yirga has listed on the sheet;

2. to identify the three policies that should be enforced immediately and to state the reasons why these policies should be followed;

3. to identify the three policies that should not be enforced except in an extreme emergency and to state the reasons why these policies should be postponed at this time.

Decision sheets follow on which you and members of your group are to do these three things in order to help Mrs. Yirga.

Decision Sheet No. 1

Rank-order Decision Sheet

Directions: Rank-order the following policies from those you are most willing to accept to those you are least willing to accept. To do this place a "1" by the policy you most want accepted; a "2" by the policy you want accepted next; and so on until you have placed a "9" by the policy you hope never gets accepted.

_____ all audio-visual equipment including film, filmstrips, overhead projectors and tape recorders will no longer be used.

_____ air-conditioning in the classrooms will be turned off.

_____ air-conditioning in the library will be turned off.

_____ warm water only will be available for the showers in physical education.

_____ all field trips will be cancelled.

_____ use of school facilities such as the gym, library, etc., after 3:00 p.m. will be stopped.

_____ the serving of hot and warm foods in the cafeteria will be severely reduced.

_____ the reading center located in a portable classroom which uses equipment, air-conditioning, and lights, will be closed down.

_____ in case of colder weather, heaters will be turned on only on extremely cold mornings and turned off at 10:00 a.m.

Decision Sheet No. 2

The Three Policies to be Enforced

The three policies to be enforced are:

1. _____

_____

2. _____

_____

3. _____

_____

Our reasons for believing that these three things should be given up first are:

_____

_____

_____

_____

_____

Members of the group who made this decision are:

_____

_____

_____

_____

_____

Decision Sheet No. 3

The Worst Policies to be Postponed

The three policies that are not to be enforced unless absolutely necessary are:

1. _____

_____

2. _____

_____

3. _____

_____

Our reasons for believing these three things should be preserved are:

_____

_____

_____

_____

_____

Persons participating in making this decision are:

_____

_____

_____

_____

_____

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Discussion Starters

1. What policy did the school board expect Mrs. Yirga to follow?

2. What caused the school board to pass such a policy?

3. How are the policies you were asked to consider related to problems of energy use?

4. What is the relationship between energy use and environmental protection?

5. What other ways of conserving energy might Mrs. Yirga consider?

6. Is it fair for the school board to place the burden of the decision on principals like Mrs. Yirga.

7. If Mrs. Yirga had made the decisions by herself, what would be your feelings toward her?

8. If your own local school board began cutting energy use at your school, would you be upset?

VIII. RECAPITULATION

Environmental education instructional units seek to help students clarify relationships between environmental knowledge and decisions related to the environment. A major aim of these units is the rational consideration and use of scientific knowledge as individuals examine alternatives and set policies which affect the ecological balance of "spaceship Earth." As described here, values clarification is one way environmental education teachers may attain this instructional objective.

Values clarification may be defined in terms of verbal patterns of behavior employed by students when they are engaged in valuing. Valuing patterns of verbal behavior may be planned for and elicited by value sheets. Value sheets can be written in at least six different formats in order to secure values clarification responses from students. If follow-up questions for value sheet exercises elicit relational student verbal responses, values clarification can occur as an integral element of ongoing instructional units in such content areas as science, social studies, behavioral sciences, and literature. Five examples illustrating one approach to values clarification have been presented in this monograph. Hopefully, these examples demonstrate that values clarification does possess theoretical and practical utility for the classroom teacher.

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*This publication contains the only detailed description of the values clarification approach described by Stahl and Casteel. Most of these other materials provide a variety of examples of value activities but very little of the "how-to-do-it" aspects of the approach. The book contains 39 examples and a detailed section on how to write your own value sheets for your own content area and classroom.

**This monograph is an attempt by Stahl to synthesize the values clarification approaches of Raths and Simon and Casteel and Stahl with the moral reasoning approach advocated by Kohlberg and his colleagues. The model focuses on the reasoning aspects of moral reasoning and development rather than the content of these reasons.

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